APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/836,969	04/17/2001	Bozidar Janko	7144 US	8484

7590 10/18/2004	EXAMINER
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ART UNIT	PAPER NUMBER
2666	

DATE MAILED: 10/18/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

	Application No.	Applicant(s)
Office Action Summary	09/836,969	JANKO ET AL.
	Examiner	Art Unit	
	Frank Duong	2666	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *17 April 2001*.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-15* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-15* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *15 April 2001* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ .

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: _____.

DETAILED ACTION

1. This Office Action is a response to the communication 04/17/01. Claims 1-15 are
pending in the application.

Drawings

2. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because
they do not include the following reference sign(s) mentioned in the description: page 6,
line 6, "reconstructor 42". Corrected drawing sheets in compliance with 37 CFR
1.121(d) are required in reply to the Office action to avoid abandonment of the
application. Any amended replacement drawing sheet should include all of the figures
appearing on the immediate prior version of the sheet, even if only one figure is being
amended. The replacement sheet(s) should be labeled "Replacement Sheet" in the
page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing
figures. If the changes are not accepted by the examiner, the applicant will be notified
and informed of any required corrective action in the next Office action. The objection to
the drawings will not be held in abeyance.

Claim Objections

3. Claim 13 is objected to because of the following informalities: Line 2, "an reference"
should read --a reference--.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. Claims 14-15 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

As per claims 14-15, there is no support for the claimed limitation of "*a second means for decoding the packetized streaming media **prior to transmission over the network** to recover the streaming media from the source for input to the media quality analyzer*" in the original specification. In according to the claim language, Examiner recognizes the Applicants intend to claim the decoder 38 of Fig. 2. However, in according to the specification, on page 5, last paragraph to page 6, line 1, in reference to Fig. 2, the features designated as "*the media for input to the reference input of the media quality analyzer 28 is derived via another decoder 38 from the original data packets from the server 16*" are disclosed. From the disclosed features, the claimed limitations of "*a second means for decoding the packetized streaming media **prior to transmission over the network** to recover the streaming media from the source for input to the media quality analyzer*", recited in claims 14-15, cannot unambiguously

derive to reasonably convey to one skilled in the relevant art that the inventors, at the

time the application was filed, had possession of the claimed invention.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly
claiming the subject matter which the applicant regards as his invention.

5. Claims 11-15 are rejected under 35 U.S.C. 112, second paragraph, as being

indefinite for failing to particularly point out and distinctly claim the subject matter which

applicant regards as the invention.

Claim 11 recites the limitation "the statistical analysis" in line 10. There is

insufficient antecedent basis for this limitation in the claim.

Dependent claims 12-15 variously depend from their indefinite parent claim 11.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set
forth in section 102 of this title, if the differences between the subject matter sought to be patented and
the prior art are such that the subject matter as a whole would have been obvious at the time the
invention was made to a person having ordinary skill in the art to which said subject matter pertains.
Patentability shall not be negatived by the manner in which the invention was made.

6. Claims 1-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Zhu et

al (USP 5,768,527) (hereinafter "Zhu") in view of Wolf et al (USP 5,446,492) (hereinafter

"Wolf").

Regarding **claim 1**, In accordance with Zhu reference entirety, Zhu discloses a

system (see '527, Fig. 5) comprising, among other things, a packetizer (502) receiving

video signal (multimedia bitstream) packetizes the video signal, transmits the

packetized video signal (514) over a packet network (504) and a depacketizer (506)

depacketizes (304) the received packetized video signal at the destination video (col.

10, lines 17-67). Zhu relies on feedback from a receiver to retransmitting the loss

packet to provide a way to improve quality of service (QoS). Zhu fails to teach a means

for measuring the video quality base on the feedback or analysis at the receiving end

comprising the limitations stated in the claims. However, such limitations lack thereof

from Zhu are well known and disclosed by Wolf.

in accordance with Wolf reference entirety, Wolf discloses a streaming media

quality analyzer system (*Fig. 2 and col. 3, line 66 to col. 5, line 38*) comprising: means

for transmitting streaming media from a source (1) over a network (3 and 11) to a

remote site (5) (*col. 4, lines 2-3*, Wolf discloses video source signal 1); means for

performing an analysis (12) of the streaming media received at the remote site (*col. 4,

line 40 to col. 5, line 13*); means for transmitting results of the analysis (30 and 32) over

the network (3 and 11) to a measurement site (6) (*col. 5, lines 13-25*); means for

reconstructing (34 and 35) at the measurement site using the results of the analysis the

streaming media received at the remote site (col. 5, lines 27-38); and means for

analyzing (35) the reconstructed streaming media at the measurement site to determine

the quality of the streaming media received at the remote site (col. 5, lines 27-38).

Thus, it would have been obvious to those skilled in the art at the time of the

invention was made, having Zhu and Wolf references readily available, to implement

Wolf's streaming media quality analyzer system into Zhu's system to arrive the claimed

invention with a motivation to provide a method of computing means squared error or

video quality in a system having video source and destination not geographically co-

located *('492, col. 2, lines 5-10 and thereinafter).*

Regarding **claim 2**, in addition to features recited in base claim 1 (see rationales

discussed above), Zhu in view of Wolf further discloses wherein the packetized

streaming media transmitting means comprises means for packetizing the streaming

media into user datagram protocol packets as the packetized streaming media *('527,*

Fig. 5; element 510 and col. 10, lines 51-53).

Regarding **claim 3**, in addition to features recited in base claim 2 (see rationales

discussed above), Zhu in view of Wolf further discloses wherein the results transmitting

means comprises means for packetizing the results into transmission control protocol

packets *('492, col. 5, lines 18-21 or '527, col. 5, line 3).*

Regarding **claim 4**, in addition to features recited in base claim 3 (see rationales

discussed above), Zhu in view of Wolf further discloses a first means for decoding the

reconstructed packetized streaming media to recover an impaired streaming media

('492; Fig. 2; element 34 and col. 6, lines 26-55); and means for determining from the

impaired streaming media the quality of the packetized streaming media received at the

remote site *('492; Fig. 2; element 35 and col. 6, lines 55-60).*

Regarding **claim 5**, in addition to features recited in base claim 4 (see rationales

discussed above), Zhu in view of Wolf further discloses wherein the determining means

comprises a media quality analyzer having a reference input coupled to receive the

streaming media from the source and a test input coupled to receive the impaired

streaming media and providing as an output a measure of the quality of the packetized streaming media received at the remote site *('492, Fig. 2; element 35 and col. 5, lines 26-38 and col. 6, lines 55-60)*.

Regarding **claim 6**, in addition to features recited in base claim 4 (see rationales discussed above), Zhu in view of Wolf further discloses wherein the determining means comprises: second means for decoding the packetized streaming media from the source to recover the streaming media *('492; Fig. 2; element 34 and col. 6, lines 26-55)*, and a media quality analyzer having a reference input coupled to receive the streaming media from the second decoding means and a test input coupled to receive the impaired streaming media and providing as an output a measure of the quality of the packetized streaming media received at the remote site *('492, Fig. 2; element 35 and col. 5, lines 26-38 and col. 6, lines 55-60)*.

Regarding **claim 7**, in addition to features recited in base claim 3 (see rationales discussed above), Zhu in view of Wolf further discloses means for recovering the packetized streaming media from the network as originally transmitted by the source, the recovered packetized streaming media being input as the packetized streaming media to the reconstructing means ('492, Fig. 2; element 18-24); means for decoding the recovered packetized streaming media and the reconstructed packetized streaming media to produce a reference streaming media and an impaired streaming media respectively ('492, Fig. 2; element 34); and means for determining from the reference streaming media and the impaired streaming media a measure of the quality of the packetized streaming media received at the remote site ('492, Fig. 2; element 35).

Regarding **claim 8**, in addition to features recited in base claim 2 (see rationales discussed above), Zhu in view of Wolf further discloses wherein the results transmitting means comprises means for packetizing the results into realtime transport control protocol packets where realtime transport protocol is used as an application layer over user datagram protocol packets ('492, *col. 5, lines 18-21 or '527, col. 5, line 3. Note: The control messages disclosed by Zhu is equated to correspond RTCP because of the network 804 of '527 patent is a packet network and the data sent is a multimedia required realtime transport protocol*).

Regarding **claim 9**, In accordance with Zhu reference entirety, Zhu discloses a method (see '527, Fig. 5) comprising, among other steps, packetizing (502) the video signal, transmitting the packetized video signal (514) over a packet network (504) and a depacketizing (506) the received packetized video signal at the destination video (col. 10, lines 17-67). Zhu relies on feedback from a receiver to retransmitting the loss packet to provide a way to improve quality of service (QoS). Zhu fails to teach steps for measuring the video quality base on the feedback or analysis at the receiving end comprising the limitations stated in the claims. However, such limitations lack thereof from Zhu are well known and disclosed by Wolf.

in accordance with Wolf reference entirety, Wolf discloses a streaming media quality analyzer method (*Fig. 2 and col. 3, line 66 to col. 5, line 38*) comprising: transmitting streaming media from a source (1) over a network (3 and 11) to a remote site (5) (*col. 4, lines 2-3*, Wolf discloses video source signal 1); performing an analysis (12) of the streaming media received at the remote site (*col. 4, line 40 to col. 5, line 13*);

transmitting results of the analysis (30 and 32) over the network (3 and 11) to a

measurement site (6) (*col. 5, lines 13-25*); reconstructing (33 and 35) at the

measurement site using the results of the analysis the streaming media received at the

remote site (col. 5, lines 27-38); and analyzing (35) the reconstructed streaming media

at the measurement site to determine the quality of the streaming media received at the

remote site (col. 5, lines 27-38).

Thus, it would have been obvious to those skilled in the art at the time of the

invention was made, having Zhu and Wolf references readily available, to implement

Wolf's streaming media quality analyzer method into Zhu's teaching to arrive the

claimed invention with a motivation to provide a method of computing means squared

error or video quality in a system having video source and destination not

geographically co-located (*'492, col. 2, lines 5-10 and thereinafter*).

Regarding **claim 10**, In accordance with Zhu reference entirety, Zhu discloses a

system (see '527, Fig. 5) comprising, among other things, a packetizer (502) receiving

video signal (multimedia bitstream) packetizes the video signal, transmits the

packetized video signal (514) over a packet network (504) and a depacketizer (506)

depacketizes (304) the received packetized video signal at the destination video (col.

10, lines 17-67). Zhu relies on feedback from a receiver to retransmitting the loss

packet to provide a way to improve quality of service (QoS). Zhu fails to teach a means

for measuring the video quality base on the feedback or analysis at the receiving end

comprising the limitations stated in the claims. However, such limitations lacks thereof

from Zhu are well known and disclosed by Wolf.

in accordance with Wolf reference entirety, Wolf discloses a streaming media

quality analyzer system (*Fig. 2 and col. 3, line 66 to col. 5, line 38*) comprising: means

for transmitting streaming media from a source (1) over a network (3 and 11) to a

remote site (5) (*col. 4, lines 2-3*, Wolf discloses video source signal 1); means for

performing an analysis (12) of the streaming media received at the remote site (*col. 4,*

line 40 to col. 5, line 13); means for transmitting results of the analysis (30 and 32) over

the network (3 and 11) to a measurement site (6) (*col. 5, lines 13-25*); means at the

measurement site for reconstructing (33 and 35) from the packetized streaming media

from the source and the results from the remote site the packetized streaming media as

received at the remote site (col. 5, lines 27-38); and means for analyzing (35) the

reconstructed streaming media at the measurement site to determine the quality of the

streaming media received at the remote site (col. 5, lines 27-38).

Thus, it would have been obvious to those skilled in the art at the time of the

invention was made, having Zhu and Wolf references readily available, to implement

Wolf's streaming media quality analyzer system into Zhu's system to arrive the claimed

invention with a motivation to provide a method of computing means squared error or

video quality in a system having video source and destination not geographically co-

located (*'492, col. 2, lines 5-10 and thereinafter*).

Regarding **claim 11**, In accordance with Zhu reference entirety, Zhu discloses a

system (see '527, Fig. 5) comprising, among other things, a packetizer (502) receiving

video signal (multimedia bitstream) packetizes the video signal, transmits the

packetized video signal (514) over a packet network (504) and a depacketizer (506)

depacketizes (304) the received packetized video signal at the destination video (col. 10, lines 17-67). Zhu relies on feedback from a receiver to retransmitting the loss packet to provide a way to improve quality of service (QoS). Zhu fails to teach a means for measuring the video quality base on the feedback or analysis at the receiving end comprising the limitations stated in the claims. However, such limitations lack thereof from Zhu are well known and disclosed by Wolf.

in accordance with Wolf reference entirety, Wolf discloses a streaming media quality analyzer system (*Fig. 2 and col. 3, line 66 to col. 5, line 38*) comprising: means for transmitting streaming media from a source (1) over a network (3 and 11) to a remote site (5) (*col. 4, lines 2-3*, Wolf discloses video source signal 1); a reference server ('492, Fig. 2; element 26-32) located at the remote site having as an input the packetized streaming media as received at the remote site and having as an output an analysis (12) of the streaming media (*col. 4, line 40 to col. 5, line 13*); means for transmitting the analysis (30 and 32) over the network (3 and 11) to a measurement site (6) (*col. 5, lines 13-25*); a receiver emulator (34 and 35) having as inputs the packetized media (*outputs of 32 into 34 or output of 15 into 35*) the analysis and having as an output a reconstructed packetized streaming media that resembles the packetized streaming media received at the remote site (*col. 5, lines 27-38 and col. 6, lines 26-60*); and means for analyzing (35) the reconstructed streaming media to determine the quality of the streaming media received at the remote site (col. 5, lines 27-38).

Thus, it would have been obvious to those skilled in the art at the time of the invention was made, having Zhu and Wolf references readily available, to implement

Wolf's streaming media quality analyzer system into Zhu's system to arrive the claimed

invention with a motivation to provide a method of computing means squared error or

video quality in a system having video source and destination not geographically co-

located ('492, col. 2, lines 5-10 and thereinafter).

Regarding **claim 12**, in addition to features recited in base claim 11 (see

rationales discussed above), Zhu in view of Wolf further discloses means for decoding

the reconstructed packetized streaming media to recover an impaired streaming media

('492; Fig. 2; element 34 and col. 6, lines 26-55); and a media quality analyzer having

the impaired streaming media as an input which determines the quality of the

packetized streaming media received at the remote site ('492; Fig. 2; element 35 and

col. 6, lines 55-60).

Regarding **claim 13**, in addition to features recited in base claim 12 (see

rationales discussed above), Zhu in view of Wolf further discloses wherein the media

quality analyzer has a reference input to which the streaming media from the source is

applied and a test input to which the impaired streaming media is applied, and has an

output providing a measure of the quality of the packetized streaming media received at

the remote site ('492, Fig. 2; element 35 and col. 5, lines 26-38 and col. 6, lines 55-60).

Regarding **claim 14**, in addition to features recited in base claim 13 (see

rationales discussed above), Zhu in view of Wolf further discloses wherein the analyzing

means further comprises a second means for decoding ('492, Fig. 2; elements 18-24)

the packetized streaming media prior to transmission over the network ('492, Fig. 2; 3 or

"527, Fig. 5; 504) to recover the streaming media from the source for input to the media

quality analyzer ('492, col. 4, lines 2-7).

Regarding **claim 15**, in addition to features recited in base claim 14 (see

rationales discussed above), Zhu in view of Wolf further discloses wherein the analyzing

means further comprises means at the measurement site for recovering the packetized

streaming media from the network resembling the packetized streaming media prior to

transmission over the network, the recovered packetized streaming media being input to

the second decoding means to recover the streaming media from the source (col. 5,

lines 27-38 and col. 6, lines 26-60).

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to

applicant's disclosure.

Galler et al (USP 5,883,665).

DeGollado et al (USP 6,41,623).

8. Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Frank Duong whose telephone number is (571) 272-

3164. The examiner can normally be reached on 7:00AM-3:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Seema Rao can be reached on (571) 272-3174. The fax phone number for

the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the

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you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free).

Frank Duong
Examiner
Art Unit 2666

October 5, 2004